

Product Information

Pigment preparations for wood stains and decorative paints

Version: 02/2023

WorléeTransoxid, WorléeBlackpaste, WorléeWhitepaste, WorléePaste S-AK x1x as well as **WorléePaste W x3x** are solvent and water based pigment pastes for paints and coatings. Especially for wood stains, the products are widely used.

The portfolio includes both solvent- and water-based options.

The solvent borne pigment preparations are based on a long oil alkyd resin dissolved in an aromatic free solvent. For the waterborne preparations the pigments are dispersed in water and wetting agent.

The pastes are subject to strict colourimetric quality control. This ensures exact color and good reproducibility. By combining the products, a wide range of colours for wood stains can be produced.

Pigment preparation

Solvent based	Water based
→ moderate solvent content is accepted formulation VOC 2010 approved systems	→ no solvent
→ broad compatibility	→ broad compatibility
→ easy incorporation	→ easy incorporation
→ free of aromatic solvents	→ flowable
→ flowable	→ slightly thixotropic
→ slightly thixotropic	→ high color strength
→ high color strength	


Technical Data: Solvent based iron oxide, carbon black and titanium oxide preparations

	Worlée Transoxid S Red	Worlée Transoxid S Yellow	Worlée Blackpaste S	Worlée Whitepaste S
Pigment	Transparent iron oxide red	Transparent iron oxide yellow	Carbon black	Titanium oxide
Color index	P.R. 101	P.Y. 42	P.BI. 7	P.W. 6
Color index no.	77491	77492	77266	77891
Pigment content [%]	approx. 39	approx. 39	approx. 25	approx. 65
Binder	Long oil alkyd	Long oil alkyd	Long oil alkyd	Long oil alkyd
VOC content [g/L] Aromat. free KW 180-220	430 – 450	430 – 450	420 – 440	approx. 430
Density [g/cm ³] (DIN 51757/C)	approx. 1,30	approx. 1,27	approx. 1,01	approx. 1,70
Viscosity [mPas] (Brookfield DV2T, Sp.3/SP.4)	300 – 1000	300 – 800	3000 – 7000	approx. 1000

Technical Data: Solvent based colored pigment preparations for wood stain

	WorléePaste S-AK 412	WorléePaste S-AK 512	WorléePaste S-AK 610
Pigment	violet	blue	green
Color index	P.V. 23	P.B. 15:2	P.G. 7
Pigment content [%]	approx. 20	approx. 20	approx. 20
Binder	Long oil alkyd	Long oil alkyd	Long oil alkyd
VOC content [g/L] Aromat. free KW 180-220	approx. 510	approx. 512	approx. 475
Density [g/cm ³] (DIN 51757/C)	approx. 0,91	approx. 0,91	approx. 0,96
Viscosity [mPas] (Brookfield DV2T, Sp.3/Sp.4)	approx. 1500	approx. 1500	approx. 1800


Technical Data: Water based iron oxide, carbon black and titanium oxide preparations

	Worlée Transoxid W Red	Worlée Transoxid W Yellow	Worlée Blackpaste W	Worlée Paste W 931
Pigment	Transparent iron oxide red	Transparent iron oxide yellow	Carbon black	Titanium oxide
Color index	P.R. 101	P.Y. 42	P.BI. 7	P.W. 6
Color index no.	77491	77492	77266	77891
Pigment content [%]	approx. 40	approx. 40	approx. 40	approx. 50
Dispersion medium	Water / wetting agent	Water / wetting agent	Water / wetting agent	Water / wetting agent
pH-value	8 – 10	8 – 10	7,5 – 9	approx. 8,1
VOC content [g/L]	≤ 50	≤ 50	≤ 5	≤ 5
Density [g/cm ³] (DIN 51757/C)	approx. 1,45	approx. 1,43	approx. 1,21	approx. 1,52
Viscosity [mPas] (Brookfield DV2T, Sp. 3)	approx. 600	approx. 600	approx. 1500	approx. 1000

Technical Data: Water based colored pigment preparations for wood stain

	WorléePaste W 432	WorléePaste W 530	WorléePaste W 630
Pigment	violet	blue	green
Color index	P.V. 23	P.B. 15:1	P.G. 7
Pigment content [%]	approx. 12,5	approx. 22	approx. 25
Dispersion medium	Water / wetting agent	Water / wetting agent	Water / wetting agent
pH-value	approx. 6,4	approx. 6,3	approx. 6,5
VOC content [g/L]	≤ 5	≤ 5	≤ 5
Density [g/cm ³] (DIN 51757/C)	approx. 1,02	approx. 1,14	approx. 1,13
Viscosity [mPas] (Brookfield DV2T, Sp. 3)	approx. 850	approx. 1550	approx. 1750

The above declarations serve for information purposes only. In particular, they shall not be relevant to define binding specifications for any orders. With respect to any order, the specifications shall be governed by the provisions of the sales contract to be concluded between the parties (e.g. the "product specification").

Any deliveries are exclusively subject to our general standard terms and conditions in their respectively valid version. We will be happy to provide you with the general standard terms and conditions upon your request and they can be downloaded online at <http://www.worlee.de/GSTC>

Worlée-Chemie GmbH • Grusonstraße 26 • D-22113 Hamburg • Tel.: +49 40 73333-2500 • Fax: +49 40 73333-2450 • E-Mail: handel@worlee.de • www.worlee.de

Starting point formulation 1.4284 - 05

Solventborne thin layer wood stain, yellow, VOC ≤ 400 g/L, Category A / e

1	WorléeKyd L 8004	approx. 100%	48,00	Worlée
2	OS-Calcium		0,20	Borchers
3	Sojalecithin STA Konz		0,20	Lubrizol
4	WorléeAdd 810 Paste	10% in dearomat. HC 180 - 220	4,00	Worlée
5	Acematt TS 100		1,00	Degussa
6	Enova Aerogel MT 1100		0,50	Cabot
7	Ceridust 9615 A		0,60	Clariant
8	WorléeTransoxid S Yellow		10,00	Worlée
9	WorléeAdd 373 N		0,50	Worlée
10	Cozirc 69		0,40	OMG UK
11	Dearomat. KW 180-220		31,30	
12	Dowanol DPM		2,00	DOW
13	OS-Calcium 10		0,80	Borchers
14	Borchi Nox M2		0,50	Borchers
			100,00	

Manufacturing specification:

Take first position 1 - 4 and disperse strongly with the dissolver. Add pos. 5 - 7 under stirring and disperse until a particle size < 15 µm is achieved. Add pos. 8 and mix well. Complete the paint by adding pos. 9 - 14.

Technical Data:

Flow time DIN 53211-4, 20°C	approx. 25 s
Non volatile content	approx. 58%
Density 20°C	approx. 0,93 g/cm ³
VOC content	approx. 390 g/l



TML solvent based systems

Revision: 07/2020

Starting point formulation 1.4281-61:

Solventborne wood stain, red, VOC ≤ 400 g/L, Category A / e

1	WorléeThix L 8050	approx. 100%	51,80	Worlée
2	OS-Calcium 10		0,20	Borchers
3	Sojalecithin STA Konz		0,20	Lubrizol
4	Köstropur 050818		2,00	CWK/Worlée
5	WorléeTransoxid S Red		6,00	Worlée
6	WorléeAdd 373 N		1,00	Worlée
7	Nuodex Combi APB		3,50	Rockwood
8	Dearomat. KW 180-220		34,80	
9	Borchi Nox M2		0,50	Borchers
			100,00	

Manufacturing specification:

Add items 1 - 3 and mix with the dissolver until a temperature of 50-60 °C is reached. Add pos. 4 and disperse strongly. Add pos. 5 while stirring. Complete the paint by adding pos.6-9.

Technical Data:

Non volatile content	approx. 58%
Density 20°C	approx. 0,92 g/cm ³
VOC content	approx. 380 g/l



TML solvent based systems

Revision: 07/2020

Starting point formulation 1.6094-12:

Wood care oil, color teak

1	WorléeKyd V 5241 U	approx. 100%	22,00	Worlée
2	WorléeKyd S 5703	55% in dearomat. HC 160-200	18,20	Worlée
3	WorléeAdd 810 Paste	10% in dearomat. HC 160-200	2,00	Worlée
4	Soya-Lecithin-Cnc. STA		0,20	Lubrizol
5	Hi-Sil T 800		0,20	Raimund Müller
6	Deurex MX 9815		3,00	Deurex AG
7	WorléeTransoxid S Red		1,00	Worlée
8	WorléeTransoxid S Yellow		0,40	Worlée
9	WorléeBlackpaste S		0,10	Worlée
10	OS-Kobalt 6		0,30	Borchers
11	WorléeAdd 373 N		0,50	Worlée
12	Dearomat. HC 180-220		51,70	
13	Borchi Nox M2		0,40	Borchers
			100,00	

Manufacturing specification:

Take position 1-4- and disperse with dissolver. Add position 5 – 6 and disperse strongly. Add position 7 – 9 while stirring and mix well. Complete the paint by adding position 10 – 13.

Technical Data:

Flow time DIN 53211-4, 20°C	approx. 13 s
Non volatile content	approx. 36%
Density 20°C	approx. 0,86 g/cm ³
VOC content	approx. 550 g/l



Starting point formulation 1.6094-14:

Wood care oil, colour teak, cobalt free

1	WorléeKyd V 5241 U	Approx. 100%	30,00	Worlée
2	WorléeAdd 810 Paste	10% in dearomat. HC 160-200	2,50	Worlée
3	Hi-Sil T 800		0,20	Raimund Müller
4	Ceratan MX 9815		3,00	Münzing
5	WorléeTransoxid S Red		1,35	Worlée
6	WorléeTransoxid S Yellow		0,50	Worlée
7	WorléeBlackpaste S		0,15	Worlée
8	WorléeAdd 2560		0,60	Worlée
9	WorléeAdd 373 N		0,30	Worlée
10	Dearomat. HC 180-220		60,40	
11	WorléeAdd 411 N		1,00	Worlée
			100,00	

Manufacturing specification:

Start with position 1 and 2 and mix it with the dissolver. Add pos. 3 and 4 and disperse it. Add pos. 5 - 11 while stirring and mix it well.

Technical Data:

Flow time DIN 53211-4, 20 °C:	approx. 13 s
Non volatile part:	approx. 34%
Density, 20 °C:	approx. 0.84 g/cm ³
VOC - content:	approx. 560 g/l

Starting point formulation 1.6094-01:

Thin layer wood stain, color pine

1	WorléeKyd V 5241 U	approx. 100%	50,00	Worlée
2	WorléeAdd 810 Paste	10% in dearomat. HC 160-200	2,00	Worlée
3	Soya-Lecithin-Conc. STA		0,20	Lubrizol
4	Hi-Sil T 800		0,20	Raimund Müller
5	Köstropur 050818		4,00	CWK / Worlée
6	Deurex MX 9815		1,00	Deurex AG
7	WorléeTransoxid S Red		0,30	Worlée
8	WorléeTransoxid S Yellow		3,00	Worlée
9	OS-Kobalt 6		0,50	Borchers
10	OS-Calcium 10		0,70	Borchers
11	OS-Zirkonium 12		0,60	Borchers
12	WorléeAdd 373 N		1,00	Worlée
13	Dearomat. HC 180-220		34,00	
14	Borchi Nox M2		0,50	Borchers
			100,00	

Manufacturing specification:

Take first a part of position 1 and complete position 2-3 and premix with dissolver. Add 4 – 6 and disperse strongly. Add position 7 – 8 while stirring. Complete the paint by adding rest of position 1 and position 9 – 14.

Technical Data:

Flow time DIN 53211-4, 20°C	approx. 25 s
Non volatile content	approx. 58%
Density 20°C	approx. 0,92 g/cm ³
VOC content	approx. 386 g/l



Solvent based pigment preparations for colored wood stain

With WorléeTransoxid S, WorléeBlackpaste S, Worlée Whitepaste S and WorléePaste S-AK (in blue, green and violet) it is possible to produce a great variety of colors for wood stain. Some mixing ratios [%] can be found below.

Color	Worlée Transoxid S Red	Worlée Transoxid S Yellow	Worlée Black-paste S	Worlée White-paste S	Worlée Paste S-AK 412	Worlée Paste S-AK 610
Walnut	68,00	23,30	8,70	-	-	-
Rosewood	46,10	23,10	-	-	30,80	-
Pine	9,10	90,90	-	-	-	-
Fir. Green 1	-	28,50	14,30	-	-	57,20
Fir. Green 2	-	-	13,33	20,00	-	66,67
Teak	66,65	26,65	6,70	-	-	-
Ebony	21,45	7,15	71,40	-	-	-
Dark oak, rustic	13,15	78,95	7,90	-	-	-
Light oak	6,05	90,90	3,05	-	-	-
Chestnut	81,00	10,35	8,65	-	-	-
Mahagony	96,80	-	3,20	-	-	-



The above declarations serve for information purposes only. In particular, they shall not be relevant to define binding specifications for any orders. With respect to any order, the specifications shall be governed by the provisions of the sales contract to be concluded between the parties (e.g. the "product specification"). Any deliveries are exclusively subject to our general standard terms and conditions in their respectively valid version. We will be happy to provide you with the general standard terms and conditions upon your request and they can be downloaded online at <http://www.worlee.de/GSTC>

Starting point formulation 6.5826 – 31, 29, 27:

Waterborne, silk gloss wood stain

			brown	red	yellow	
1	Demin. water		51,80	52,70	52,70	
2	Kelzan RD		0,20	0,20	0,20	CP Kelco
3	WorléeAdd 624	25% in alcohol/ester	1,00	1,00	1,00	Worlée
4	Köstropur® W 050818		0,75	0,75	0,75	Worlée
5	WorléeSol NW 474	60% in water	41,65	41,65	41,65	Worlée
6	WorléeTransoxid W Yellow		1,50	-	3,30	Worlée
7	WorléeTransoxid W Red		2,60	3,30	-	Worlée
8	WorléeBlackpaste W		0,10	-	-	Worlée
9	Octa Soligen Co 7 aqua		0,20	0,20	0,20	Borchers
10	WorléeAdd 340		0,20	0,20	0,20	Worlée
			100,00	100,00	100,00	

Technical Data:

Flow time DIN 53211-4, 20°C	approx. 30 s
Non volatile content	approx. 28%
VOC content	approx. 27 g/l



Water based pigment preparations for colored wood stain

With WorléeTransoxid W, WorléeBlackpaste W and WorléePaste W (in white, blue, green and violet) it is possible to produce a great variety of colors for wood stains. Some mixing ratios [%] can be found below.

Color	Worlée Transoxid W Red	Worlée Transoxid W Yellow	Worlée Black-paste W	Worlée Paste W 931	Worlée Paste W 432	Worlée Paste W 630
Walnut	72,73	24,24	3,03	-	-	-
Rosewood	40,00	20,00	-	-	40,00	-
Pine	7,69	92,31	-	-	-	-
Fir. Green 1	-	34,36	10,65	-	-	54,95
Fir. Green 2	-	-	9,51	29,66	-	60,84
Teak	69,31	26,40	4,29	-	-	-
Ebony	29,27	9,76	60,98	-	-	-
Dark oak, rustic	16,22	81,08	2,70	-	-	-
Light oak	14,08	84,51	1,41	-	-	-
Chestnut	73,04	24,35	2,61	-	-	-
Mahagony	76,19	22,86	0,95	-	-	-



The above declarations serve for information purposes only. In particular, they shall not be relevant to define binding specifications for any orders. With respect to any order, the specifications shall be governed by the provisions of the sales contract to be concluded between the parties (e.g. the "product specification").

Any deliveries are exclusively subject to our general standard terms and conditions in their respectively valid version. We will be happy to provide you with the general standard terms and conditions upon your request and they can be downloaded online at <http://www.worlee.de/GSTC>